VARIABLE FOCUS LENS DEVICE

Publication number: JP2001013306
Publication date: 2001-01-19
Inventor: KITAYAMA HIROYUKI; HORIKIRI TOMONARI
Applicant: CANON KK
Classification:
- international: ***G02B26/08; G02B3/14;*** **G02B26/08; G02B3/12;** (IPC1-7): G02B3/14; G02B26/08
- European:
Application number: JP19990181747 19990628
Priority number(s): JP19990181747 19990628

Abstract of **JP2001013306**

PROBLEM TO BE SOLVED: To provide a variable focus lens device in which the surface form of the lens can be stably maintained by suppressing the changes in the lens surface form against the changes in the external force having an effect on the liquid lens. SOLUTION: A conductive liquid 13 containing a gelling agent and an insulating liquid drop 11 are housed in a cell 19, and a circular drop contact region 15 in contact with the drop 11 is formed on the inner surface of the cell. A surface layer 14 having lower affinity to the drop 11 than that of the insulating layer 12 is formed on the insulating layer 12, and an opening 14E is formed in a part of the layer 14 to expose a part of the insulating layer 12. The drop contact region 15 consists of the exposed part of the insulating layer. The interfacial form between the conductive liquid 13 and the drop 11 is changed by changing the voltage applied by a voltage applying means V between an electrode 16 on the opposite face of the insulating layer 12 to the conductive liquid 13 and the drop 11, and an electrode 17 in contact with the conductive liquid 13. The cell 19 has a light-transmitting property in the portion corresponding to the path of the incident and outgoing light on the interface.